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Physical fitness in children with developmental coordination disorder

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Developmental coordination disorder (DCD) is often described in a neurological developmental condition expected mental, medical or neurological disease. The impairments of motor performance and motor skill lead to decreased function of daily activities and physical activity. Physical activity is important for building up physical fitness. Children with DCD who have impaired motor skill and low physical activity may have low level of physical fitness. The aim of the study was to examine and compare the physical fitness between children with DCD and children with typical development (TD) at the age of 7-10-year-old. Children with DCD were diagnosed with the criteria of DSM-5. Two participants (one child with DCD and one child with TD) finished the data collection. Physical fitness was a complex dimension, including body composition, cardiorespiratory fitness, flexibility and muscle fitness. The body composition was presented with BMI. FEV1 and FVC were presented as cardiorespiratory fitness. Sit to reach test was used to evaluate the flexibility. The muscle strength and endurance were measured in knee push up-U/E for the upper extremity (U/E) and sit up-trunk at maximal speed to generate a maximal number of repetitions within 30 s. for trunk and a longest duration in a wall sit L/E at maximal speed to within 1 min for lower extremity (L/E). Each test was performed with 1 time. The preliminary results showed that there was no difference between children in body composition and L/E strength and endurance. However, the child with DCD showed lower cardiorespiratory fitness and lower U/E and trunk muscle strength and endurance than child with TD. Currently we emphasize the importance of muscle strength and endurance that may be related to the cardiorespiratory fitness.

Biography

Tzu Wei Chang is currently pursuing her graduation in the Department of Physical Therapy, National Cheng Kung University, Taiwan. She has participated in projects that focused on children with developmental coordination disorder and learned many great skills in interacting with children and understood her enthusiasm to be a physical therapist.

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